



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/567,657

10/26/2006

Shigeru Nishio

64851 (70904)

2426

21874

7590

07/07/2011

EDWARDS ANGELL PALMER & DODGE LLP

P.O. BOX 55874

BOSTON, MA 02205

EXAMINER

LEGESSE, HENOK D

ART UNIT

PAPER NUMBER

2861

MAIL DATE

DELIVERY MODE

07/07/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Art Unit: 2861

Continuation of 11. does NOT place the application in condition for allowance because:

Response to Arguments

1. Applicant's arguments filed 06/09/2011 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., electrostatic suction discharge head discharging without the use of oscillations provided by a piezoelectric element, electrostatic suction head configuration without the use of a piezo and/or a thermal elements) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant argument regarding the limitations "line-drawing means utilizes an intermittent discharge phenomenon where the frequency varies depending on the voltage and the electrical conductivity of the fluid", applicants attention is directed to (col.4 lines 3-13,59-66 and figs.1-3 of Hotomi).

In response to applicant argument that Hotomi does not recognize at all that the miniaturization of the diameter of a discharge hole of a nozzle to 0.01 μ m to 15 μ m makes it possible to discharge a fluid through a nozzle of a discharge head. In the electrostatic suction head (figs.1,12) of Hotomi, the meniscus 1m is formed by the pressure from the pezo element 2 and the ejection drop 1d is caused by the electrostatic suction of electrode 17. Hotomi further recognizes the miniaturization of the diameter of

Art Unit: 2861

a discharge hole of a nozzle (15) to 20 μ m to 200 μ m. It should be noted that applicant's disclosure discusses diameters ranging from 0.01 μ m to 25 μ m and this range was claimed in the claim under discussion before it was amended and is still claimed in the withdrawn claims. In the absence claimed factors such as ejection frequency, applied electrostatic energy/voltage and type of ink used, modifying the nozzle of Hotomi to have diameters ranging from 0.01 μ m to 15 μ m based on the Hertz and/or Grimes et al in view of Hotomi's disclosed nozzle diameters ranging 20 μ m to 200 μ m would be obvious to one ordinary skilled in the art as discussed in the final office action.

Finally, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENOK LEGESSE whose telephone number is (571)270-1615. The examiner can normally be reached on Mon.- Fri. Between. 8:00 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW LUU can be reached on (571)272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2861

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MATTHEW LUU/
Supervisory Patent Examiner, Art
Unit 2861

H.L.
July 1, 2011